What are cyclic steam injection wells –

Cyclic steam injection wells are a type of enhanced oil recovery well that uses alternating phases of steam injection and oil production from the same well. Cyclic steam wells inject into hydrocarbon-bearing formations to recover oil that is very viscous. The steam is used to heat the oil in order to cause it to flow towards the wellbore; then the oil is brought to the surface. There are several thousand cyclic steam wells in CA and they are regulated by the CA Division of Oil, Gas, and Geothermal Resources as Class II Underground Injection Control (UIC) wells. As with other Class II wells in CA, cyclic steam wells would require approval of an aquifer exemption by EPA if the oil-bearing formation they inject into is an aquifer with TDS levels below 10,000 mg/L (ppm). As EPA noted in our letter of March 9, 2015, the State did not include a specific accounting of cyclic steam wells in its "Breakdown of Wells Potentially Injecting into Non-Exempt USDW Zones" (Enclosure B of the State's February 6, 2015 letter to EPA). Thus, EPA is requiring the State to update Enclosure B by May 15, 2015 to include cyclic steam wells, and provide a schedule for completing the State's review of these wells and bringing them into compliance by February 15, 2017.

How are cyclic steam wells regulated?

Cyclic steam wells are regulated by DOGGR as Class II wells. These wells are subject to the state's regulations in the California Code of Regulations, Title 14.

From SB4 - SB4's newly enacted Public Resources Code section 3157 of Division 3, Chapter 1, as amended, defines oil and gas well stimulation as: "any treatment of a well designed to enhance oil and gas production or recovery by increasing the permeability of the formation. Well stimulation treatments include, but are not limited to, hydraulic fracturing treatments and acid well stimulation treatments. Well stimulation treatments do not include steam flooding, water flooding, or cyclic steaming. Additionally, such treatments do not include routine well cleanout work, routine well maintenance, routine removal of formation damage due to drilling, bottom hole pressure surveys, or routine activities that do not affect the integrity of the well or the formation."